





# Defusing



# Danger

Story and Photos by Beth Reece

**E**XPLOSIVE ordnance technicians agree there's no such thing as an expert. It's nearly impossible to know all the various types of bombs, grenades, land mines and projectiles that exist, not only in the U.S. military inventory, but also in those of other nations.

"The senior person at this school probably doesn't know even a tenth of the millions of munitions that exist," said SGM Thomas Curtis, top Army NCO at the joint-service, Navy-run School of Explosive Ordnance Disposal at Eglin Air Force Base, Fla.

The school's seven-month basic EOD course teaches soldiers how to keep explosives from destroying life and property. Sound simple? Each year about 40 percent of the basic-course students drop out because of academic pressure.

"You've got to be able to think on your own without a step-by-step guide," said PFC Alexander Gray, a recent graduate who sees a diploma from EOD school as a license just to learn the job. "School is an initiation that ensures we can all speak the same language. The real learning starts when we get to our units."

## Learning the Trade

Survival in this critical field requires painstaking attention to detail. It's also contingent upon discerning

SPC Deanna Miley, a student at the Navy-run School of Explosive Ordnance Disposal at Eglin Air Force Base, Fla., is tested on the electric firing mechanism.

the precise dangers of unexploded ordnance, knowing when to disarm an explosive and when to blow it up, and knowing what tools to use in the process.

Students are warned not to merely memorize what they learn. Instead, they must think comprehensively and know how to compare the physical features of ordnance they can't identify with information published in trade manuals.

In demolition, students learn to destroy ordnance non-electrically with a fuse, or electrically by attaching a wire and blasting cap that's connected to a remote trigger. While the loud explosions and smoke are always impressive, EOD soldiers say, it's not their leading method of disarmament.

"There's a misconception that we just chuck explosives on top and tear it away. But more often than not, we'll make an explosive safe on the spot because of other safety concerns, then move it someplace where we can eliminate it so it'll never bother anyone again," said instructor SFC Thomas Hewitt.

Rendering ordnance safe is a meticulous, step-by-step process that requires selective attention. One wrong move — like forgetting to use protective equipment or placing remote

power tools one-eighth of an inch off the mark — can result in severe injury, death or the destruction of vital equipment.

"Personal safety is more important than anything else," said instructor SFC Tamiko Bogad.

But safety is never a guarantee in EOD.

"Some procedures are just less dangerous than others," Curtis said. "Ordnance is designed to go off. So just walking up on it is extremely dangerous, and there could be hundreds or thousands of devices to deal with, not just one."

Students must pass more than 40

tests at EOD school, many of them hands-on, and often with munitions they haven't seen in training.

"They've got to get used to applying basic principles and comparing information to determine what they're working with," Curtis said. "If soldiers get nervous here, where the ordnance is just plastic or concrete, imagine how they'll be a week after graduation when they're working on real ordnance."

Those who haven't failed a test in the first few months often do so in the 30-day air-ordnance phase, which covers aircraft explosive hazards, guided missiles, bombs and bomb fuses, dispensers and payloads



EOD instructor Mark Hawkins (right) helps student PFC Alexander Gray fine-tune his operational skills with the Andros robot.





— some of the most sophisticated equipment EOD techs ever work with.

“You can remember 99 percent of the information in air ordnance but forget one percent and fail the test,” said recent graduate CPT Jim Wood.

Pilots needing to make an emergency landing with a fully loaded aircraft must first eject ordnance off the plane. EOD techs go

after the jettisoned ordnance and render it safe, and also deal with potential explosive hazards remaining on the aircraft. Even the pilot’s seat is explosive, because it contains a rocket motor to eject the seat and pilot in an emergency.

EOD techs face ever-present dangers of ground ordnance in such places as Iraq and Bosnia. The perils include projectiles, grenades, land mines, rockets and booby traps.

The key to disarming ground ordnance is being able to differentiate among the various types, and keeping up on developing technology. While some land mines are designed simply to immobilize any object that passes, for example, others are programmed to pick specific targets.

EOD techs proved their proficiency during Operation Desert Storm, when they eliminated hazards posed by thousands of land mines, grenades, rockets and guided missiles, as well by discarded small-arms ammunition.

“You can go out into the desert one day and not see a single mine, but come back the next day after a

sandstorm and see mines everywhere,” said instructor SSG Dallas Tatum.

Add to the danger the complications posed by a nearby fuel tank, command post or classified information, and the implications of an explosion multiply.

The restricted nature of homemade bombs and terrorist devices places them last in the EOD school curriculum. School officials want to be sure a person is likely to graduate before introducing them to improvised explosives.

“What students learn here is probably just enough to make them scary, but history shows that no one in EOD has ever used the information against the United States,” Curtis said.

The devastating potential of improvised explosive devices was obvious after the 1995 bombing of the Alfred P. Murrah Federal Building in



▲ CPT John Panchalk demonstrates the Mk. 26 ferrous ordnance locator, which can detect ordnance up to six meters below ground.

▶ SGT Keith Hopper inserts the safety pins into different types of aircraft ordnance ejector racks.



Oklahoma City, Okla. But until the Sept. 11 terrorist attacks almost two years ago, EOD was still a somewhat obscure field, Curtis said.

"I think everybody is going to know who we are from now on. Today, almost every installation has EOD techs on its force-protection teams."

Robotics add safety to the improvised explosive dimension by allowing techs to handle explosives remotely using joysticks that control robots from a distance. One robot carries a \$300,000 price tag.

## Something New Everyday

Change is a certainty in EOD, where soldiers do their jobs in both peace and war. One day it's a bomb threat, the next it's a plane crash. "Every day it's something different,



PFC Christopher Chadwell, another student at the Eglin AFB EOD school, carefully traces the outline of a practice land mine before attempting to "safe" it.



PFC Geoffrey Goings displays the elements that make up many improvised explosive devices — TNT and smokeless powder.

from going out to safe a grenade range to teaching a bomb-threat class at a local abortion clinic," Curtis said.

Civilian bomb squads specialize primarily in homemade bombs, so civilian communities rely on the Army's technical savvy for all other explosives. Without the Army's aid, Curtis believes there'd be many more civilian and military casualties.

The Army has fewer than 40 EOD companies, with 22 soldiers authorized for each. EOD techs have been in Kuwait since Operation Desert Storm. Three EOD units are currently in Bosnia and four are in Afghanistan.

In Iraq, EOD techs provided safety to front-line troops by checking out weapons and munitions caches, bunkers, and even oil wells, to ensure they weren't booby-trapped.

Wherever the president of the United States and first lady go, EOD techs go first. "We search their hotels and motorcades, crawl down into sewer systems and elevators, jump on their beds and flush their toilets to make sure there's nothing inside," Tatum said.

Most EOD techs show loyalty to their field by choosing long-term

careers over brief enlistments. Many are converts from other occupational specialties. Rangers, tankers and artillerymen are lured by watching EOD techs in action, Curtis said.

"When something those other soldiers fire doesn't go off, they call us for help," he said. "Our job is a really big responsibility and other soldiers


see that. They're impressed watching a young staff sergeant close the range so he can safe the area."

SGT Wesley Kuhns was attracted to the constancy of EOD's mission.

"I spent five years in the infantry, where we were always training for war. We

were always preparing, but I wanted a job that I could actually do everyday," he said.

Explicit trust in peers may be another draw for prospective EOD techs, who always work in pairs. One tech does the hands-on work, the other zeroes in on safety.

"You can count on the quality of people to your left and right to be excellent, and you can count on them to know what they're doing," Curtis said. "Your life depends on it." 

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# EOD in Iraq

Story and Photos by SPC Joshua Hutcheson



CPT Bryan Sopko, commander of the 725th EOD Co., prepares to destroy an Iraqi arms cache using C-4 plastic explosive.



EXPLOSIVE ORDNANCE DISPOSAL

**E**Xplosive ordnance disposal teams will be busy in the days ahead, ridding Iraq of devices such as grenades, rockets, missiles and mortar rounds that remain buried in fields or laying in streets and front yards.

“My guys take risks in order to minimize the risks to others,” said CPT Bryan Sopko, commander of the 725th EOD Company from Fort Drum, N.Y. His unit supported the 101st Airborne Division during its advance through Iraq.

One of the first sites they cleared was at an agricultural school in An Najaf, where the division’s 1st Brigade had set up its tactical operations center.


A weapons cache found in the school and weapons and ammunition found at other sites throughout the city were taken to a pit and destroyed. But completing the roundup of explosives hadn’t been simple: Unexploded ordnance was spread over a large area; some was found in the streets and some was found intact within yards of where soldiers worked and lived.

The 1st Bde. soldiers also told the EOD teams they were guarding an Iraqi truck full of rockets that were marked with symbols that might indicate chemical weapons. Another report hinted that a nearby building contained mortar shells that had tested positive for mustard gas.

In another part of the city, a street was littered with KB-1 submunitions — golf ball-sized explosives that had been scattered when munitions-carrying trucks had been destroyed. The street had been roped off, but Iraqi civilians removed the ropes and were driving or walking among the explosives.

Sopko dispatched teams to each site to evaluate the areas and to remove or destroy the munitions they encountered.

While in theater, the 725th will continue to provide direct mission support to the 101st and work to make Iraq a safer place, Sopko said.

Still early into their mission, they had already destroyed 8,739 projectiles, 14 U.S.-made submunitions, 187 Russian-made submunitions, 54 rockets, 2,605 fuses and 16,800 rifles and other small arms. 

SPC Joshua Hutcheson is a member of the 101st Airborne Division public affairs section.

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- ▶ Soldiers of the 725th EOD Co. examine a cache of unexploded Iraqi ordnance found at a school in An Najaf.
- ▶ PFC Robert Wiltshire walks along a section of road in An Najaf littered with golf ball-sized KB-1 submunitions scattered when the Iraqi trucks carrying them were destroyed.



A cache of rocket-propelled grenades and missiles from Iraqi tanks is destroyed by soldiers of the 725th EOD Co.





The EOD mission into "Ammo Alley" is keeping ordnance out of the hands of those wishing to destabilize the local governments in Afghanistan.



# EOD in Afghanistan

Story by CPL Keith A. Kluwe

**A**N explosive ordnance disposal mission in Afghanistan ended April 15 when technicians destroyed two caches of ordnance in what has come to be called “Ammo Alley.”

The mission was delayed more than a year, after three EOD technicians and a special forces soldier were killed in an April 15, 2002, explosion at the same site, 35 kilometers northwest of Kandahar Air Field.

“One of my good friends — SGT Jamie Mulligans — was killed there last year,” said SSG Baylin Oswald, a team leader with the 731st Ordnance Company from Wright-Patterson Air Force Base, Ohio. “This mission brought closure, being able to go out to where he was killed and destroy that cache.”

Others who finished the mission recalled their fallen comrades.


“Everyone felt their loss. We’re a very tight-knit community, so when someone dies in the line of duty, their

name doesn’t just go on a memorial. We all remember them, because we knew them from school or through friends,” said team leader SSG Jeffrey Mclean of the 754th Ord. Co. at Fort Monmouth, N.J.

EOD teams from the 731st, 754th and 705th Ord. companies rigged the two piles of ordnance with C-4 explosives that destroyed the caches of Chinese-made fin-stabilized rockets similar to those used in attacks against U.S. bases in Afghanistan.

The mission into “Ammo Alley” has kept weapons and ordnance out of the hands of people wishing to destabilize the national and provincial governments in Afghanistan, or cause harm to U.S. forces, officials said.

“But Ammo Alley is still a big concern. There is still a lot of ammunition and ordnance out there that can be used by anyone who wants to do harm to coalition forces,” Mclean said.

There are still more than 20 known munitions cache sites in the valley. 

CPL Keith A. Kluwe is assigned to the CTF-82 Public Affairs Office.

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EXPLOSIVE ORDNANCE DISPOSAL

